

AMENDMENTS TO THE CLAIMS

Claims 1-15 (Cancelled)

16. (Currently Amended) A device formed in a semiconductor material of a first conductivity type, the semiconductor material having a surface, the device comprising:

a first well of a second conductivity type formed in the semiconductor material, the first well having a dopant concentration;

a second well of the second conductivity type formed in the semiconductor material, the second well having a dopant concentration and being spaced apart from the first well;

a first contact region of the first conductivity type formed in the first well;

a second contact region of the second conductivity type formed in the first well, the second contact region being electrically connected to the first contact region to have a same potential;

a first trigger region of the second conductivity type formed in the first well, the first trigger region being spaced apart from the first and second contact regions;

a third contact region of the first conductivity type formed in the second well;

a fourth contact region of the second conductivity type formed in the second well, the fourth contact region being electrically connected to the third contact region to have a same potential;

a second trigger region of the second conductivity type formed in the second well, the second trigger region being spaced apart from the third and fourth contact regions;

a separation region of the semiconductor material located only between the first and second trigger regions, the separation region contacting the surface, the first trigger region, and the second trigger region, the separation region having only the first conductivity type; and

a device region that overlies and contacts the surface at a location where the separation region contacts the surface between the first and second trigger regions, the device region at the location being free of a gate, and not lying below a gate.

17. (Previously Presented) The device of claim 16 wherein the first and second trigger regions are formed on opposite sides of the separation region.

18. (Previously Presented) The device of claim 16 wherein
the first trigger region has a dopant concentration greater than the dopant concentration of the first well; and
the second trigger region has a dopant concentration greater than the dopant concentration of the second well.

19. (Cancelled)

20. (Previously Presented) The device of claim 16 wherein the first trigger region is not directly electrically connected to the third contact region, and the second trigger region is not directly electrically connected to the first contact region.

Claims 21-30 (Cancelled)

31. (New) The device of claim 16 wherein
the first trigger region adjoins the semiconductor material; and
the second trigger region adjoins the semiconductor material.

32. (New) The device of claim 16 wherein during a first ESD event, a first potential on the first and second contact regions is greater than a second potential on the third and fourth contact regions.

33. (New) The device of claim 32 wherein during a second ESD event, a third potential on the third and fourth contact regions is greater than a fourth potential on the first and second contact regions.

34. (New) The device of claim 16 wherein
the semiconductor material has a top surface;
the first well has a side surface that contacts the top surface, and a bottom surface that contacts the side surface; and
the first trigger region is spaced apart from the bottom surface.

35. (New) A device comprising:
a semiconductor region of a first conductivity type, the semiconductor region having a top surface;
a first well of a second conductivity type that contacts the semiconductor region;
a first connection region of the first conductivity type that contacts the first well;
a second connection region of a second conductivity type that contacts the first well, the second connection region being electrically connected to the first connection region to have a same potential;
a first trigger region of the second conductivity type that contacts the first well and the semiconductor region, the first trigger region being spaced apart from the first and second connection regions, and having a dopant concentration that is substantially greater than a dopant concentration of the first well;
a second well of the second conductivity type that contacts the semiconductor region;
a third connection region of the first conductivity type that contacts the second well;

a fourth connection region of the second conductivity type that contacts the second well, the fourth connection region being electrically connected to the third connection region to have a same potential;

a second trigger region of the second conductivity type that contacts the second well and the semiconductor region, the second trigger region being spaced apart from the first trigger region and the third connection region, and having a dopant concentration that is substantially greater than a dopant concentration of the second well, no region of the first conductivity type lying between the first and second trigger regions; and

a device region that overlies and contacts only the top surface of the semiconductor region between the first and second trigger regions, the device region being free of a gate, and not lying below a gate.

36. (New) The device of claim 35 wherein the fourth connection region is spaced apart from the second trigger region.

37. (New) The device of claim 36 wherein the first, second, third, and fourth connection regions are spaced apart from the semiconductor region.

38. (New) The device of claim 36 wherein the first connection region lies between the second connection region and the first trigger region.

39. (New) The device of claim 38 wherein the third connection region lies between the fourth connection region and the second trigger region.

40. (New) The device of claim 36 wherein during a first ESD event, a first potential on the first and second connection regions is greater than a second potential on the third and fourth connection regions.

41. (New) The device of claim 40 wherein during a second ESD event, a third potential on the third and fourth connection regions is greater than a fourth potential on the first and second connection regions.

42. (New) The device of claim 36 wherein:
the first trigger region is spaced apart from a bottom surface of the first well;
and
the second trigger region is spaced apart from a bottom surface of the second well.

43. (New) The device of claim 36 wherein the first trigger region is not directly electrically connected to the third connection region, and the second trigger region is not directly electrically connected to the first connection region.